AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A method for covalently immobilizing probe-biomolecules on organic surfaces, wherein

(a) at least one probe-biomolecule with at least one polymer and/or copolymer, which has at least two photoreactive groups per molecule, is dissolved and

(b) the mixture from (a) is applied to a surface and covalently immobilized thereon by irradiation with light of a suitable wavelength.

2. (Original) A method as in claim 1, wherein the polymer is a swellable polymer, in which there are at least two identical or different photocross-linkable groups per polymer chain and/or the copolymer is a swellable copolymer, in which there are at least two identical or different photocross-linkable groups per copolymer chain.

3. (Currently Amended) A method as in ~~claims 1 or 2~~claim 1, wherein the polymer and/or copolymer is/are applied to the surface by printing and then cross-linked afterwards.

4. (Currently Amended) A method as in ~~any one of claims 1 through 3~~claim 1, wherein benzophenone or its derivatives, anthraquinone or its derivatives, nitrophenylazide and thymidine or their derivatives is/are used as (a) photoreactive group(s).

5. (Currently Amended) A method as in ~~any one of claims 1 through 4~~claim 1, wherein the photoreactive group(s) is/are ultraviolet-reactive.

6. (Currently Amended) A method as in ~~any one of claims 1 through 5~~claim 1, wherein the application in step (b) defined in claim 1 results in the formation of a pattern through printing.

7. (Currently Amended) A method as in ~~any one of claims 1 through 6~~claim 1, wherein the polymer surface consists of cycloolefin copolymers, polystyrene, polyethylene, polypropylene, or polymethylmethacrylate.

8. (Currently Amended) A method as in ~~any one of claims 1 through 7~~claim 1, wherein a partner of a specifically interacting system of complementary bonding partners (receptor/ligand) is used as a probe-biomolecule.

9. (Original) A method as in claim 8, wherein the specifically interacting system of complementary bonding partners is based on the interaction of a nucleic acid with a complementary nucleic acid, the interaction of a peptide nucleic acid (PNA) with a nucleic acid, or the enzyme/substrate, receptor/ligand, lectin/sugar, antibody/antigen, avidin/biotin or streptavidin/biotin interaction.

10. (Original) A method as in claim 9, wherein the nucleic acid is a DNA or an RNA or an analog thereof.

11. (Original) A method as in claim 10, wherein the DNA or RNA is an oligonucleotide.

12. (Original) A method as in claim 11, wherein the antibody is a polyclonal, monoclonal, chimeric, or "single chain" antibody or a functional fragment or a derivative of such an antibody.

13. (Currently Amended) An organic surface with probe-biomolecules covalently immobilized thereon, attainable by a method as in ~~any one of claims 1 through 12~~claim 1.

14. (Currently Amended) An organic surface with probe-biomolecules covalently immobilized thereon, wherein a pattern is formed, attainable by a method as in ~~any one of claims 1 through 12~~claim 1.

15. (Currently Amended) ~~The use of~~A sensor chip comprising an organic surface as in claim 13~~ or 14 as a sensor chip~~.

16. (Currently Amended) A medical or diagnostic instrument ~~that has~~comprising an organic surface as in claim 13~~ or 14~~.